ECONOMICS OF NATURAL HAZARDS



Veronique Florec, Fiona Gibson, Morteza Chalak, Atakelty Hailu, Abbie Rogers, David Pannell

School of Agricultural and Resource Economics, University of Western Australia Centre for Environmental Economics and Policy, University of Western Australia Contact: david.pannell@uwa.edu.au

THIS PROJECT EVALUATES THE TANGIBLE AND INTANGIBLE COSTS AND BENEFITS OF NATURAL HAZARDS AND MITIGATION OPTIONS TO HELP DECISION MAKERS PRIORITISE INVESTMENTS.

What level of investment?

Do we have sufficient public resources available for mitigation of natural hazards?

What level of investment minimises mitigation costs and natural hazard damages?



Including intangibles

What are the environmental, social and health costs and benefits of natural hazard mitigation?

What difference does it make to include intangible values in benefit-cost analyses?

Which option(s)?

How can we efficiently allocate limited resources to mitigate the impacts of natural hazards?

Which combination of prevention and response provides the best value for money?

Which option(s)?

Which mitigation option(s) provides the highest net benefits?

Changing policy

What would be the financial, social and environmental consequences of changing current mitigation policies?

What would be the consequences of maintaining the status quo?

CASE STUDIES

- Analysis of mitigation options for flood management in the Brown Hill and Keswick catchments in Adelaide
- Analysis of prescribed burning options in private land and public land in the Mount Lofty Ranges in South Australia
- Including intangible values in mitigation decision making in Western Australia and South Australia
- Analysis of prescribed burning options in public land in the southwest of Western Australia



PROJECT BENEFITS

- This research will provide insights into the trade-offs between different mitigation options
- Develop a database of the intangible values that are affected by natural hazards or mitigation actions
- Help managers identify the best allocation of resources to reduce the damaging impacts of natural hazards and limit increases in mitigation costs
- Identify the requirements for sound economic analysis of natural hazard mitigation





